FAQs for Providers

Overview

What is injection safety?

Injection safety, or safe injection practices, is a set of measures taken to perform injections in an optimally safe manner for patients, healthcare personnel, and others. A safe injection does not harm the recipient, does not expose the provider to any avoidable risks and does not result in waste that is dangerous for the community. Injection safety includes practices intended to prevent transmission of infectious diseases between one patient and another, or between a patient and healthcare provider, and also to prevent harms such as needlestick injuries.

What is aseptic technique?

In this context, aseptic technique refers to the manner of handling medications and injection equipment to prevent microbial contamination. Aseptic technique applies to the handling, preparation, and storage of medications. It also applies to the handling of all supplies used for injections and infusions, including syringes, needles, and intravenous (IV) tubing.

What are some of the incorrect practices that have resulted in transmission of pathogens?

Practices that have resulted in transmission of hepatitis C virus (HCV) and/or hepatitis B virus (HBV) include the following:

- Using the same syringe to administer medication to more than one patient, even if the needle was changed;
- Using the same medication vial for more than one patient, and accessing the vial with a syringe that has already been used to administer medication to a patient;
- Using a common bag of saline or other IV fluid for more than one patient, and accessing the bag with a syringe that has already been used to flush a patient’s catheter.

For what types of procedures have these incorrect practices been identified?

Unsafe injection practices that put patients at risk for HCV, HBV and other infections have been identified during various types of procedures. Examples include the following:
From the Centers for Disease Control and Prevention (CDC)
http://www.cdc.gov/injectionsafety/providers/provider_faqs.html

- Administration of anesthetics for outpatient surgical, diagnostic and pain management procedures;
- Administration of other IV medications for chemotherapy, cosmetic procedures, and alternative medicine therapies;
- Use of saline to flush IV lines and catheters;
- Administration of intramuscular (IM) vaccines.

The involved medications were in single-use vials, multi-dose vials, and bags. What they had in common was the vials or bags were used for more than one patient and were entered with a syringe that had already been used for a patient; or the syringe itself was used for more than one patient.

Can some of these incorrect practices also result in transmission of bacterial infections?

Yes. These incorrect practices put patients at risk for bacterial, fungal, and viral infections.

Do medication vials have a preservative in them to prevent contamination?

Most multi-dose medication vials that are intended for several medication administrations have a preservative in them to prevent bacterial growth. Single-use vials do not contain a preservative. The preservative has no effect on viruses. Safe injection practices and appropriate aseptic technique are necessary to prevent bacterial and viral contamination of medication vials that can result in patient infections.

Injection Procedures

How should I draw up medications?

Parenteral medications should be accessed in an aseptic manner. This includes using a new sterile syringe and needle to draw up medications while preventing contact between the injection materials and the non-sterile environment. Proper hand hygiene should be performed before handling medications, and if a medication vial has already been opened, the rubber septum should be disinfected with alcohol prior to piercing it.

Where should I draw up medications?

Medications should be drawn up in a designated "clean" medication area that is not adjacent to areas where potentially contaminated items are placed. Examples of contaminated items that should not be placed in or near the medication
preparation area include: used equipment such as syringes, needles, IV tubing, blood collection tubes, needle holders (e.g., Vacutainer® holder), or other soiled equipment or materials that have been used in a procedure. In general, any item that could have come in contact with blood or body fluids should not be in the medication preparation area.

**What does single-use mean?**

A single-use parenteral medication should be administered to one patient only. Single-use IV solutions should be administered to one patient only, during one treatment. Syringes and needles should be used for a single patient only for a single procedure.

**Is it acceptable to combine leftover medication from single-use vials?**

NO. Do not administer medications from single-use vials or ampules to multiple patients or combine leftover contents for later use.

**Is it acceptable to use single-use medication vials or pre-filled syringes for more than one patient?**

NO. Medication vials that are labeled for single-use and pre-filled medication syringes should never be used for more than one patient.

**Is it acceptable to leave a needle or other device inserted in the septum of a medication vial for multiple medication draws?**

NO. A needle or other device should never be left inserted into a medication vial septum for multiple uses. This provides a direct route for microorganisms to enter the vial and contaminate the fluid.

**What is the best way to use multi-dose medication vials?**

The safest thing to do is restrict each medication vial to a single patient, even if it's a multi-dose vial. Proper aseptic technique should always be followed. If multi-dose medication vials must be used for more than one patient, the vial should only be accessed with a new sterile syringe and needle. It is also preferred that these medications not be prepared in the immediate patient care area.

**When should a multi-dose medication vial be discarded?**
Medication vials should be discarded upon expiration or any time there are concerns regarding the sterility of the medication.

**Is it acceptable to use the same syringe to give IM or subcutaneous (SC) injections to more than one patient if I change the needle between patients?**

**NO.** Once they are used, the syringe and needle are both contaminated and must be discarded. Use a new sterile syringe and needle for each patient.

**Is it acceptable to use the same syringe to give an IM or IV injection to more than one patient if I change the needle between patients and I don't draw back before injecting?**

**NO.** A small amount of blood can flow into the needle and syringe even when only positive pressure is applied outward. The syringe and needle are both contaminated and must be discarded.

**If I used a syringe only to infuse medications into an IV tubing port that is several feet away from the patient's IV catheter site, is it ok to use the same syringe for another patient?**

**NO.** Everything from the medication bag to the patient's catheter is a single interconnected unit. All of the components are directly or indirectly exposed to the patient's blood and cannot be used for another patient. A syringe that intersects through ports in the IV tubing or bags also becomes contaminated and cannot be used for another patient. Separation from the patient's IV by distance, gravity and/or positive infusion pressure does not ensure that small amounts of blood are not present in these items.

**Are these recommendations new?**

**NO.** These recommendations are part of established guidance. It is a well established practice to never use the same syringe or needle for more than one patient nor to enter a medication vial with a syringe or needle used for one patient if the same vial might be used for another patient.

**Why can't I just visually inspect syringes to determine whether they are contaminated or can be used again?**

Pathogens including HCV, HBV, and human immunodeficiency virus (HIV) can be present in sufficient quantities to produce infection in the absence of visible
blood. Similarly, bacteria and other microbes can be present without clouding or other visible evidence of contamination. Just because you don’t see blood or other material in a used syringe or IV tubing does not mean the item is free from potentially infectious agents. All used injection supplies and materials are potentially contaminated and should be discarded.

**How can healthcare providers ensure that injections are performed correctly?**

To help ensure that staff understand and adhere to safe injection practices, we recommend the following:

- Designate someone to provide ongoing oversight for infection control issues
- Develop written infection control policies
- Provide training
- Conduct quality assurance assessments

**Where can I go for more information?**

The World Health Organization (WHO) Injection Safety site

The Centers for Disease Control and Prevention (CDC)

- Infection Control in Healthcare Settings
- Viral Hepatitis